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Association of Indian Universities



BIRLA INSTITUTE OF TECHNOLOGY

MESRA : RANCHI - 835215

(Deemed University)

ADMISSION NOTIFICATION 1999

The Entrance Examination for Admission to

(A) UNDER GRADUATE DEGREE COURSES :

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(2) B.E. (Bachelor of Engineering - 4 Years) Course in Civil, Computer Science, Electrical and Electronics, Electronics and Communication, Mechanical, Production & Polymer Engineering.

(3) B.Pharm. (Bachelor of Pharmaceutical Sciences - 4 Years) Course.

There shall be four Papers for each of these Programmes eg. Physics, Chemistry, Maths and Architecture qualifying for B.Arch., Physics, Chemistry, Maths and qualifying paper for B.E. and Physics, Chemistry, Biology, and qualifying paper for B.Pharm.

(B) POST GRADUATE DEGREE COURSES:

1) M.B.A. (Master of Business Administration) 2 Yrs. Full-Time Course and 3 Yrs. Part-Time Course.

2) M.C.A. (Master of Computer Applications) 3 Yrs. Full-Time Course and 4 & 1/2 Yrs. Part-Time Course.

3) M.Sc. (Information Science-M.I.S.) 2 Yrs. Full-Time Course.

4) M.Sc. (Master in Bio-Medical Instrumentation-B.M.I.) 2 Yrs. Full-Time Course.

(C) POST GRADUATE DIPLOMA COURSE :

P.G.D.C.A. (Diploma in Computer Applications) 1 Yr. Full-Time Course and 1 & 1/2 Yrs. Part-Time Course.

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Agra, Ahmedabad, Allahabad, Bangalore, Bareilly, Bhagalpur, Bhopal, Bhubaneswar, Bokaro Steel City, Calcutta, Chandigarh, Chennai, Dehradun, Delhi, Dhanbad, Guwahati, Ghaziabad, Gorakhpur, Hyderabad, Jaipur, Jamshedpur, Kanpur, Lucknow, Mumbai, Muzaffarpur, Nagpur, Patna, Ranchi, Trivandrum, Varanasi and Vijayawada, provided sufficient number of candidates opt for the proposed centres.

ELIGIBILITY: FOR UNDER GRADUATE COURSES :

(1) Bachelor of Architecture : I.Sc./10+2 or equivalent with Physics, Chemistry and Mathematics.

(2) Bachelor of Engineering: I.Sc./10+2 or equivalent with Physics, Chemistry and Mathematics.

(3) Bachelor of Pharmaceutical Sciences: I.Sc./10+2 or equivalent with Physics, Chemistry and Biology with 50% marks in aggregate.

Maximum age limit for admission in undergraduate courses is 21 years as on 1.10.1999 relaxable by 5 years in case of SC/ST candidates.

ELIGIBILITY : FOR POST GRADUATE COURSES :

(1) M.B.A. (Master of Business Administration): Full-Time Course 2 years and Part-Time Course 3 years

Graduate (10+2+3 system) in any discipline with at least 50% aggregate marks at graduate level. For Part-Time students in addition 3 years experience in a reputed firm after graduation is necessary.

(2) M.C.A. (Master of Computer Applications): Full-Time Course 3 years and Part-Time Course 4 & 1/2 years

Graduate (10+2+3 system) with Mathematics/Statistics as one of the subjects either at +2 or graduation level obtaining atleast 50% aggregate marks at graduate level. For Part-Time students in addition 3 years experience in a reputed firm after graduation is necessary.

(3) M.Sc. (Information Science-M.I.S.): Full-Time Course of 2 years.

Graduate (10+2+3 system) in any discipline with at least 50% aggregate marks at graduate level.

(4) M.Sc. (Master in Bio-Medical Instrumentation-B.M.I.): Two years programme with six months Internship in Hospital.

Graduate (10+2+3 system) with at least 50% aggregate marks at graduate level with Physics /Electronics/Instrumentation as one of the subjects.

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Please note that Part - Time Programme shall be offered through Technology Centre, Lalpur in evening.

Minimum aggregate percentage requirements are relaxable upto 5% in case of S.C. /S.T. candidates.

Those appearing at the various qualifying examination are also eligible. The selected candidates will however, be required to produce the qualifying examination result by 30th September 1999.

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THE LAST DATE FOR RECEIPT OF COMPLETED APPLICATION FORM IS APRIL 7, 1999.

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Date : Jan. 3th 1999.

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OSD & Controller of Entrance Examinations

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Editor :

SUTINDER SINGH

Multicultural Education Implications for the Indian Teacher

Ravikala Kamath*

The Need for a New Approach

In India, the cliché "Unity in diversity" has become worn out, not so much by misuse, rather by lack of mobilisation of proactive sustained action. There is a strong indication for imperative urgent change from passive tolerance of differences (be they religio-communal, linguistic or ethnic) to positive action, training and education at all levels. It follows, therefore, that educational institutions and educators as change agents should assume responsibility for ushering well conceived socialisation practices with pedagogical inputs to create the ethos of respect stemming from cognisance of similarities and dissimilarities of groups.

What is Multicultural Education?

Multicultural education, according to Banks (1991) is an 'idea, an educational reform movement and a process'. Succinctly, the idea of multicultural education is that all students — male, female, disabled, rich, poor, from different racial and ethnic groups or speaking different languages — should have full and equal opportunity to learn in school and be respected. As an educational reform movement, multicultural education aims to change the effects of diversities; though, how best to do it continues to be a challenging search and an unresolved debate. However, it is considered important in the 'global village' concept that all the members around the globe must develop basic 'multicultural literacy', to be able to understand the underlying precepts, values and implementation of multicultural perspectives. The contemporary society must go beyond the concept of cultural diversity¹, to include and nurture sensitization towards cultural pluralism² and cultural relativism³.

The Dilemmas

It is possible to view culturally different groups vis-a-vis the dominant groups in two ways (i) from a 'deficit' perspective and (ii) from a 'difference' perspective. The former views cultural differences as deficits that must be overcome while the latter views them purely as differences about which no comparative judgements are appropriate. The dilemma continues to thrive even as yet other questions emerge..... should the multicultural approach emphasise similarities or differences? should the focus be on what is common to all or should the emphasis be on diversity (ethnocentrism)?

These unresolved dilemmas, coupled with the fact that differing pressure points of emphasis prevail and that currently multicultural education is only too often narrowing to be predominantly antiracist education and the fact that multiculturalism is itself the resultant outcome of the multi-ethnic migrations to the West — makes it necessary

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for India to critically examine the implications for our context of diversities.

At this juncture, let me elaborate, my journey through the search for the why, the what and the how of multicultural education for India.

The Emergent Indian Scene

The rationale for interest in multicultural education emerged in the Indian context very forcibly and poignantly in the wake of the violent communal riots in 1992-1993; that rocked the rubric of our peaceful co-existence. The national ethos (and pride) of 'unity-despite-diversity' was deeply shaken. There was then and exists even today in retrospect, the nagging question of "what went wrong?"... Has our heritage of mutual co-existence, tolerance and non-violence become a myth of the past? How to make it a reality of the present and actuality of the future? Where exactly did we fail? Where do we start the process of rebuilding? — These and several other allied questions are asked. One of the answers must be seen to lie within the context of education of the young and re-education of the adults. When we seek to address the issues confronting us, the cogent and concrete approach seems to be education, re-education and redefinition of values at the individual and national levels.

Introduction/initiation of the multicultural education in schools appears as an appropriate priority on the agenda for action, since thereby the outreach is vast and wide on the one hand, and the effects can be logically expected to be long enduring. Hence the need to study the experiences of the West, where multicultural education has been an organised activity seems essential.

There is some logical basis in the impression that Canada with its mandated policy of multiculturalism and its strong thrust on multicultural education for over two decades now, would provide the lessons learnt, the modules prepared, the measures tried and tested, and in short, their success stories would be the guidelines and motivators for our endeavours.

It also appeared only natural to expect that if multicultural education has to be effective and create pervasive impact, the first step would be strong concerted teacher education efforts — lest the teachers, the products of long standing prejudices and stereotypical thinking would themselves be the impediments for the efficacy of multicultural education. Thus, the first item on the action plan in my view point is the re-education of teachers through orien-

tation and training. Teacher education inputs at all levels and stages of teacher training is the need of the hour. It is my strong belief and submission that in India (for that matter anywhere else too) the multicultural education approach mobilised and targetted for the school population, growing youth and the future citizens, is essential. However to achieve that goal, the first step is teacher training (Kamath, 1996) (at the preservice/induction stage) or retraining (at the inservice stage). It is this premise that prompted my search for modules of teacher training in the West especially in Canada.

The Canadian Scenario : Glimpses

The literature search during my short study period in Canada⁴ has been extremely rewarding to reveal the prolific conceptual research and academic activity that has emerged; as also the several tangible measures adopted (not necessarily enough or always successful) towards operationalising multiculturalism into action. It is frankly easy to be dazzled by the level of rhetoric reached in words, both oral and in print the initial computer search yielded over a couple of thousand records; pointed search for 'multicultural education' reduced the listings to hundreds, but the search for teacher education/preparation/training revealed less than 25 documents (!) of which more than ten were at the level of early childhood education.... These figures are presented to indicate that though multicultural education is well-entrenched in Canada, and the ambience of multiculturalism well-established with most schools having enrolment from culturally diverse groups, teacher preparation and teacher education remains conspicuous by its paucity (not necessarily absence).

Nevertheless, almost everybody in education, and perhaps most citizens all over Canada are aware of the rudiments of the concept of multiculturalism. Everyone seemed to know about the term, define or describe it adequately (even if differently). But many of the teachers felt the need for greater inputs and support for practising multicultural education. A case in point is the excerpt from the experiences narrated by a teacher in a special school for the disadvantaged children in Scarborough, Toronto (Solinicki, 1992). This teacher, placed in a tight spot of grappling with the pervasive tension and prejudice among her high school students remarks "... the policy statement with its glossy cover ... (and) message from the chairman ... assurances (of respect and of opportunities) were all good intentions". But she asks "had they

come off the page and made their way into real life?... I need concrete approaches; lesson plans... (a) powerful hammer to break 'thought patterns and prejudices'.... I called the Board of Education they gave me a list of materials suitable for early childhood years but not for high school... they are still formulating the same (they said)... I had to formulate my own." (p. 40-43). Maseman and Mock (1986) had concluded that, "... generally speaking there is a lack of well entrenched programs (of teacher inputs on multicultural education) across the country (Canada). It is quite possible for the students in several provinces never to encounter the concepts of multiculturalism at all in their teacher training. It is possible for all teachers training in Canada to avoid taking elective course in multiculturalism.... the most significant finding in this study is how little multicultural teacher education really exists in Canada".

Almost a decade later, my search for more documented information on teacher education was not highly fruitful either. Though since then there have emerged some publications : i) a special issue (focusing on early childhood) of the periodical *Multiculturalism* in 1992;⁴ ii) a four part article series published in the same periodical issues of 1988-89;⁷ and iii) the National Study Report on 'Multicultural Education : The State of the Art' (1993).⁸ Speaking personally to the National Director of the study, Dr. Keith A. McCleod, (personal interview 1995)⁵ he revealed that there have been some concrete and coherent steps towards multicultural teacher education in the recent years but he admitted the process of documenting and publishing them will soon be taken up on a priority basis but until then multicultural teacher education will remain necessarily less known about.

Almost simultaneously, a great thrust has been on anti-racist education and teacher preparation thereof. Increasingly as I read more, breathed more of the Canadian ambience, interacted more with academics and observed closely within and around public places, on public transport and shopping malls etc... it became increasingly clear to me that multicultural education for Canada required different parameters and reflected a different framework of reference.

Contextualising for India

In informal discussions with teachers in India, when I spoke of my topic of study in Canada, the

sound of the big word 'Multicultural education' drew several blank stares, many shrugs and exclamations of "what on earth is that?" and some blatant accusations of addiction to 'jargonitis'. In a bid to explain the term multiculturalism, I resorted to the use of the concept familiar to most Indians — 'Secularism' and I found that thereby it was easier (albeit devious route) to get across the basic premise underlying multiculturalism. It was then, even feasible to impress upon them the need and urgency to translate 'policy' approaches into active learning-teaching situations for children and youth. The uptake of the idea was quick and the articulation of their conviction of the imperative need was rewarding. These experiences make me feel that what we need in India now is multicultural education approach that specifically focuses on concepts of 'Anti-bias education, prejudice reduction and social reconstruction'. These terms are not necessarily to be used interchangeably but I use them together here to convey, in essence, an approach that we in India could do well to emphasise today i.e. the 'anti-bias education'. This approach would perforce reduce prejudices and enhance tolerance with respect and dignity and pave the way for peaceful co-existence.

The underlying assumption of anti-bias approach is that the creation of a just society requires a fundamental change in institutional structures, policies and behaviours that inhibit the equitable participation of all groups as well as in personal prejudices. The goals of this approach are to ensure equitable individual participation in all aspects of society and to enable people to maintain their own culture while participating together in a common society. (Derman-Sparks, 1993). Thus anti-bias education is seen as social reconstructivist education that is essential in the march towards the 21st century. Even at the risk of sounding cliched, my submission is that India needs 'anti-bias education' for all and teacher education for the same.

The Anti-Bias Education Approach

Derman-Sparks and the ABC Task Force (1989) define anti-bias education 'as an active/activist approach to challenging prejudices, stereotyping bias and the 'isms'. In a society where differences and divides abound as in India (be it in terms of religion, caste/sub-caste categorisation, linguistic regionalism) it is necessary for each individual to be non-biased and to actively intervene, to challenge and counter the personal and institutional behaviours. It calls for a climate and ethos of not only respecting diver-

sity among people but also not accepting unfair beliefs and acts. It asks the teachers and children to confront troublesome issues rather than gloss over them. This approach requires that adults who teach or care for children to look inward at their own sense of identity and self esteem and their discomforts and biased attitudes towards others, and to work to overcome their own prejudices, learn new information and practice new behaviours.

The anti-bias education builds on developmentally appropriate and culturally respectful multicultural education. It extends learning about diversity and injustice to other arenas — gender, sexual orientation, socio-economic class, disabilities — and epitomises an activist orientation. It enables educational philosophy as well as specific techniques and content. It is perhaps Lee's (1991) description/remarks that offers logical justification for acceptance in India. Lee explains anti-bias education as a "point of view that cuts across all subject areas and addresses the histories and the experiences of people who have been left out of the curriculum. Its purpose is to help us deal equitably with all the cultural and racial differences in the human family. It is also a perspective that allows us to get at explanations for why things are the way they are in terms of power relationships and equality issues."

There is, of course, room for criticism of this approach. Some say that the anti-bias approach is unrealistic because bias cannot be eradicated and energies are directed towards the elusive goals of social change at the expense of providing more useful education for children. Others are concerned that teaching these values of anti-bias education may conflict with the values of some of the children's families who either subscribe to biased thinking or may prefer to assimilate quietly into the society (as in the 'melting pot' approach) rather than challenge the system.

The criticisms notwithstanding, the need of our nation is to develop a force of educationists committed to creating an anti-bias climate and curriculum which is empathetic to all diversities and pluralistic societies. Teachers must have knowledge of how stereotypes and prejudices, systemic discrimination and power relationship, tolerance and human rights have been used and misused in education. McCleod (1994) suggests that teachers must be trained to use methodologies and strategies that include i) principle testing which involves critical analysis and discussions of specific cases or issues of discriminations — these exercises permitting thinking of the ramifi-

cations of beliefs and behaviours; ii) contact theory : whereby people are brought into contact with each other as an experiential way of breaking down barriers and developing relations; iii) Conditioning : implies by creating expectations and reinforcing them with positive experiences; and iv) Personal factor : wherein means are established to enable persons to relate to and identify directly with situations and with people. In general, there is a need to prepare teachers emotionally and intellectually to relate to teaching children to be rid of biases and discriminating practices by creating positive learning environments wherein experiential learning techniques that foster self esteem, equality of status and critical thinking are encouraged.

Conclusion

In the earlier part of this paper I had expressed that the search for the successes abroad had spurred my research activity. However, it seems clear that we in India must also learn from the mistakes abroad and not repeat them. What we need in India, in the context of education for unity and harmony is a well prepared work force of teachers who can without biases teach children to be free from biases, teachers who have good self esteem can create the same in all children and above all teachers who can respect micro cultural identity of individuals (such as gender, language, religion, social class, race, exceptionalities etc). The stress must emphatically be on teacher education/re-education, and so while we, in India can no longer hesitate to join the band wagon of multicultural education, the plan of action must be context specific and with need based model. The thrust of the endeavours should be on the anti-bias approach, with the focal pressure on the teacher preparation and training, both at the preservice and inservice levels. Having identified our thrusts, we can then draw from the growing wealth of information and research based strategies in the West. Simultaneously within our circles brainstorming sessions, debates, discussions, action research must be mobilised.

What we need now is to provoke reflective thinking among teachers and teacher educators, to enable them to talk and think together on how best we can address the specific needs of our country's diverse groups. The teacher education curriculum must reflect these changes first, before attempting to touch the prevailing school curriculum. The proverbial question of the "chicken-egg priority" might also be

applicable here and therefore a plea of the two-pronged focus may also be valid. But I strongly reiterate that in the ultimate analysis, the impact and success of the school outcomes, will depend on the delivery by the adult teachers. It is therefore vital that the teacher corps for the foreseeable future acquire the attitudes, knowledge, skills and disposition necessary to work effectively with the diversities of student population such that they, in turn grow up to their optimal potential and justify without blemish the Indian heritage of non-violence, peaceful co-existence and unity.

Notes

1. 'Cultural diversity' refers to the presence of different cultural groups within a society. It is essentially an empirical term in that it does not entail any values about the worth or value of diversity.
2. 'Cultural Pluralism' denotes an acceptance of cultural diversity as valuable and worthwhile facet of society.
3. 'Cultural relativism' is a doctrine that holds that it is neither possible nor desirable to evaluate or judge cultural practices, patterns or beliefs of one community by using the standards of another community.
4. Study visit of the author to Canada from September 16, 1995 to October 18, 1995 — at Ontario Institute of Studies in Education, (OISE), Toronto and at McGill University, Montreal — under the Faculty Research Fellowship (1995) award programme of Shastri Indo-Canadian Institute.
5. Personal interview with Dr. Keith A. McCleod, Chair, Faculty of Education, Toronto on September 28, 1995.
6. Special Issue on Early Childhood Education, Multiculturalism, Vol XIV, 2/3 (1992).
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8. *Multi Cultural Education : The State of the Art National Study, Report #1* (1993).

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2. The author places on record, her grateful "Thanks" to all the officials of SICI at Delhi and Calgary for their timely help and cooperation and guidance in all matters personal and professional.
3. Gratitude must also be recorded to my academic contact Dr. George Dei and other colleagues at OISE for their support.

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Crisis in Higher Education

Nature and Sources

T. K. Chatterjee*

The extant literature on higher education system of our country is full of descriptions of rather incurable sickness with which it is alleged to be afflicted with. Critical analysis of the scenario with special emphasis on financial constraints are plenty. But studies on sources of the crisis and correlation of higher education with economy and social production processes are quite scanty.

Barring a few centres of excellence, almost all the colleges and universities are pictured as places full of chaos, political conflicts, poor infrastructures, excessive crowding of students, mass copying in examinations with frequent violence and an ambience of apathy and disenchantment over academic objectives. The critics denounce the system as dysfunctional on account of its massive size and unrestricted proliferation. 240 universities and 9000 colleges having enrolment of 5.5 million in the 18-23 age group are said to be unabated explosion in numbers. The graduates and postgraduates produced by these institutions are, except a few, called very poor in academic standards and unemployable in any area of social production requiring up-to-date education, knowledge and skill. The term 'unemployable' is not substantiated by data. These scholars never question the capacity of our social production system to absorb the educated manpower. Some critics hold that the quality and social relevance of higher education are so low that public expenditure for this is unproductive and sheer wastage. They also feel that public spending for higher education should be curtailed in favour of basic education at the primary and secondary levels. Recently, the Department of Economic Affairs, Ministry of Finance, Govt. of India has published in May, 1997 a discussion paper on "Government Subsidies in India". The paper is bound to reflect these views. It notes that the subsidy for services provided by the central and state govts. in 1994-95 constituted 14.4% of the GDP. Emphasizing the need to reduce the scale of subsidies by at least 50% in 3 years and by 75% in 5 years time, it makes a distinction between "merit" and "non-merit" subsidies based on the "externalities" associated with the goods/services and the benefits accruing from the subsidies to individuals or society as a whole. Education, other than elementary and agricultural edu-

cation, has been classified as non-merit because, according to the authors of the paper, the benefits of higher education accrue mainly to the recipients but not to society in general. The paper has also assumed that (a) reduction in enrolment is desirable for maintaining some sort of a balance between demand and supply of manpower; (b) substantial increase of user prices (fees and other charges) is warranted; (c) beneficiaries of higher education are predominantly from middle and upper classes; and (d) the salaried people are able to afford unsubsidized professional education. These policy guidelines appear to reflect recent World Bank and IMF exhortations to the indebted developing countries. The document has since generated a fierce debate in academic circles and has generally been rejected and condemned by scholars for its alleged ulterior motives of curbing growth of human resources, accentuating existing elitism in higher education, obstructing the means of self-reliant development and abandonment of principles of equity and access to all learners, particularly the socially and economically disadvantaged ones. The trend of privatization and commercialization of higher education set in motion by the New Economic Policy of 1991, has been gaining momentum in recent years. Consequently, serious strains are building up within the higher education zone due to further inequalities and shrinkage of opportunities.

That the State is gradually assuming a passive role for growth of higher education is clearly discernible. Allocation of funds is declining steadily — only 3.5% of GNP was spent in 1996-97 for education of all levels. The share of higher education as a percentage of GNP was 1% in 1980-81, 0.5% in 1991-92 and less than 0.4% in 1996-97. In the 4th Plan, allocation for higher education as a percentage of total outlay for education was 25%. It came down to 8% in 8th Plan. From 1983-84 to 1993-94, average annual growth rate of higher education expenditure (revenue account) has declined from about 24% to 5%. During recent years, 1990-91 onwards, rate of growth of expenditure per student in our colleges and universities has declined from 16% to about 1.3%. On non-plan account too, the absolute amount of expenditure has declined from 12.79% in 1993-94 to 11.46% in 1995-96 in the country. This is extremely alarming because non-plan grants are to be utilized for salary and other recurring expenditures only. The financial crisis strangling the institutions perhaps do not require further explanation.

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Notwithstanding the above, it is indeed distressing that the approaches towards appraisal and critical analysis of our higher education system are often found to be superficial. The discussions ultimately devolve into mere brainstorming because they neither try to identify sources of the apparent sickness nor present plausible solutions.

At least two aspects merit deeper consideration. Firstly, enrolment ratio of about 6% is shameful if we look at many other developing countries (Indonesia 10%, Brazil 12%, Mexico 14%, Thailand 19%, Argentina 41%), not to speak of the developed countries (UK 37%, France 50%, USA 81%, Canada 103%). The enrolment should rise at a pace faster than the present annual growth rate of 5.5%. It calls for rapid expansion of the system as well as consolidation and upgradation of the existing infrastructures. Introduction of courses in the emerging and thrust areas, diversification of subjects, revision of curricula to keep pace with needs of society and changing economic activities are the priorities. Often a false propaganda is made that India is overcrowded with scientists and technical manpower. Actual data reveal that the number of R&D personnel per thousand population is only 0.1 in India whereas the average for all developing countries is 0.3 and the world average (1.0) is ten times more (UNDP : 1997). Therefore, there cannot be any doubt that we require a fast increase in skilled and updated human resources for rapid national development. As the UNESCO report of 1995 points out "Access to higher education and the broad range of services it can render to society, is part and parcel of any sustainable development programme in which human expertise and professional skills are required." There is evidence all over the world that a very high correlation exists between educational qualities of the people and socio-economic growth. Obviously, much larger allocation of funds from the central and state governments (at least 6% of GNP as recommended by so many education commissions) is necessary. Privatization and commercialization can never increase absolute enrolment in such a poor country like ours. Rather, it will generate further elitism, deprive the socially disadvantaged sections, destroy the ideals of equity, introduce more discrimination and deprivation in society and impede harmonious economic growth. Recent policy shifts in the central government are clearly due to pressures exerted by the IMF and World Bank to whom it has become severely indebted disabling it to function independently. The govt. is accepting their directives to withdraw subsidies and other supports, depend on market mechanisms and openly encourage private entrepreneurs in all education levels beyond elementary.

Secondly, the problem of unemployment, par-

ticularly among those completing graduation and higher degrees, must be considered at a deeper level. Data for unemployment at various educational standards of job seekers are not readily available. It is a common experience that except for professional education, unemployment of other degree holders (including a large part of vocationally trained personnel) is enormous. In 1992, total number of applicants in live register of employment exchanges was 36.8 million. Stock of graduates and postgraduates in Arts, Science and Commerce in the country in 1992 were about 11 and 3.5 million respectively making a total of 14.5 million (*Manpower Profile India Yearbook*, 1995). From the figures of total unemployment, it may be assumed that most of these degree holders were without jobs. There is also a tendency to acquire higher degrees for maintaining relative market positions in the context of pervasive joblessness. Underemployment of degree holders is yet another problem. The Education Policy of 1986 envisaged delinking of degrees from jobs. It, as expected, failed to make any impact on the unemployed educated youth who desperately compete for lower jobs to survive in an unjust society.

It is thus a paradoxical situation. To meet the aspirations of higher education and to create more and more educated manpower by means of faster growth of enrolment in the higher educational institutions mean suffocating in a sea of surplus manpower. It is indeed strange that the question of employment opportunities for the human resources for faster economic growth hardly find any mention in the heaps of reports and articles on education system. The authors of these documents perhaps refuse to see any correlation between education and employment. Their concerns for more active role of the State, larger allocation of funds and expansion of facilities for R&D for the sake of economic and social development are genuine. It is however unfortunate that these scholars do not proceed beyond this point. They never analyse the ills prevalent in our economic policies which are responsible for lack of employment opportunities or feeble demand for skilled manpower. What is even worse, some of them contend that to test the relevance of education on the touchstone of assurance of jobs will convert education into a commodity. To them, real relevance of education lies in cultivating curiosity and developing ability to think. It is a pity that they refuse to look beyond education for education's sake. Other critics also must appreciate that increased state funding and faster growth of enrolment ratio in higher education may lead to more serious complications unless the educated manpower is absorbed in social production and services. In other words, adequate manpower planning seems to be an essential pre-condition for balanced growth of higher education. Absorption of job

seekers having certain qualifications, skill and expertise in suitable jobs and vocations will remove crowding at the doors of higher academic levels and only those really committed to pursue academic objectives will go in for higher education.

As already mentioned, empirical evidence, the world over, supports a very high correlation between educational levels and rates of socio-economic growth. But these processes require appropriate steps for expanding the economic activities in agriculture, industry and service sectors and increasing the purchasing power of people. Land reforms have been suggested by many economists as a necessary precondition for boosting the economy. Our government has not shown interest to take such steps. The economy is now very sluggish at annual growth rate of about 4%. It mainly depends on the purchasing power of middle and upper classes comprising about 20% of the population. Presumably at the dictates of the Fund-Bank combine, the path of self-reliant development has given way to unequal competition with the MNCs in the name of globalization. More and more dependence on capital-intensive high technology leads to massive unemployment as an obvious consequence. A World Bank report entitled *Higher Education : The Lessons of Experiences* emphasizes the clear importance of higher education for economic growth and social development and calls for much larger investment in higher education. It also states "Graduate unemployment in developing countries rose sharply during the 1980s and continues to rise. This reflects principally the sluggish growth of aggregate demand for highly skilled labour and the diminished role of the public sector as the main employer of university graduates.... where statistics exist, they show that the rapid expansion of higher education has often been accompanied by increasing levels of graduate unemployment and underemployment". So far so good. But it is intriguing that the report has avoided suggesting reforms to boost generation of employment opportunities. It is now generally agreed that the policy guidelines of the Bank and Fund always contribute to rapid shrinking in job creations and slowing down of economic growth rate. There are figures to show that this is happening in our country too.

Economy is the base of society. Education is its superstructure. Since the two are correlated in a dialectic way, educational policy should not be formulated in isolation from the economic activities of society. Reasons for the so-called incurable sickness of higher education cannot be traced within the confines of education system only. Many ills and disorders are fall out of the economic life, particularly, absence of manpower planning in a country of bur-

geoning population. The organic link between higher education and need of employment of the educated human resources reflect the dialectic correlation between economy and education. It is a symbiotic and synergic correlation which has to be incorporated in the policies governing both economic planning and expansion of higher education with a view to ensure optimum uses of human capital and physical capital.

Note : Most of the data have been taken from University News, Vol 36, No. 24, June 15, 1998.

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REGISTRAR

Clinical Supervision

The New Trend in Supervision

Patrick Manu*

Introduction

Students and supervisors alike find it rewarding to approach classroom data not as isolated events or brief sequence, but in terms of an analysis of patterns of classroom behaviour.

The pattern of analysis considered here quickly becomes one of the foundations of the supervisory structure. Pattern structure asks questions on objectives, behaviour in the class, pupils' behaviour and the likely relations of all these to the pupils' learning. This is an element which is missing in our supervisory roles today, especially in India. This has necessitated a rethinking about the way supervisors in India go about their duties. If care is not taken a time will come when there will be no clear cut dichotomy between supervision and inspection. This study is in the form of a critical analysis of what clinical supervision is all about.

Clinical supervision is not a new thing in the advanced countries. It has really helped supervisors to produce quality teachers; and as it were, these quality teachers have in turn produced quality students. It will equally prove successful in India and in other third world countries where teacher training institutions are mushrooming.

History

Sullivan writes that clinical supervision started in the early sixties at Harvard University. The architect of it was Morris L. Cogan who was helped by Robert Goldhammer. It started with students in the Master of Arts in teaching program. Cogan discovered that on many occasions student teachers were left on their own by the supervisors. He condemned this attitude of supervisors and suggested that the supervisors should tackle classroom problems together with the student teacher.

In 1956 Cogan took up this challenge. In 1961 he addressed the Rhodes Island Association for Supervision and Curriculum Development. In 1962 teachers from Oregon went to University of Harvard and Pittsburg to study the subject. In 1963 the state of Oregon instituted clinical supervision for candidates in the Master of Arts in Teaching program. Those who

received training from Cogan et al. organized a series of workshops to propagate this idea. Now it is practised in many institutions, especially in the United States.

Definition

'Clinical' means 'of', 'relating to,' or 'conducted in' or 'as if' in a clinic and involving or depending on direct observation. The reference to dependence on direct observation seemed to catch exactly one of the distinguishing characteristics of clinical supervision. It also refers to the 'presentation' analysis and treatment of actual cases and concrete problems in some special field.

It involves giving close observation, detailed observational data, face-to-face interaction between the supervisor and the teacher, and an intensity of focus that binds the two together in an intimate professional relationship. It is known as teacher-centered supervision. It actually parallels the method of person-centered counselling, popularised by Carl Rogers.

A central objective of the entire clinical process is the development of the professionally responsible teacher who is analytical of his own performance, open to help from others. The rationale of clinical supervision demands, therefore, that the inputs it contributes to the education of teachers should be equal to the double task the teachers face.

The Clinical Supervisor

The supervisor, in this sense, is committed as a human being to the teacher as a human being, but as a professional he is committed to improving the students' learning by improving the teacher's performance. He and the teacher may study the patterns of the teacher's instruction together, but the objectives for change can be selected in major part by the teacher.

In this regard, the clinical supervisor needs to:

- a. Recognise the possibilities of conflicts;
- b. Avoid conceiving these differences as mutually exclusive;
- c. Develop within himself the professional resources needed to deal with these problems;
- d. Recognize the diverse sets of values impinging upon decisions about what objectives to choose in working with a teacher;

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- e. Examine and develop his own values about goal-getting in clinical supervision;
- f. Develop within himself the resources of varied and flexible strategies for dealing with these problems; and
- g. Take into account that situational factors may influence the priorities and values affecting decisions about the objectives of clinical supervision.

The clinical supervisor also needs to understand the forces within himself that shape his professional judgements. H₃^U (1987) outlines these forces as:

- a. Speed of judgement;
- b. Racial/ethnic or religious bias;
- c. Fears/anxieties; and
- d. Interpretation of the inner meanings of external events.

The clinical supervisor must also

- a. be familiar with the professional academic history of the teacher,
- b. know how the teacher views his own profession,
- c. know the teacher's perceptions about himself, and
- d. have a thorough knowledge of counselling tasks, be a resource person, a team captain, an umpire and even a co-player.

Phases of Clinical Supervision

Acheson and Damien, in their book *Techniques in the Clinical Supervision of Teachers* divided clinical supervision into three phases which can further be extended to five phases viz:

- | | |
|-----------------------------------|---------------------|
| 1. Pre conference phase | |
| 2. Observation phase | Observational |
| 3. Observation analysis phase | |
| 4. Post conference phase | Feedback conference |
| 5. Post conference analysis phase | |

1. Pre Conference Stage/Phase

The supervisor meets with the teacher and talks with him. It is the time when the teacher thinks aloud. The teacher discusses the lesson plan with the supervisor and the supervisor suggests changes or modifications. The teacher discusses with the supervisor the objectives, strategies and concerns of the teacher. The supervisor acts as a support for the teacher.

2. Observation Stage/Phase

This takes place in the classroom. It is the stage and the time when the supervisor collects his data

about the teacher's performance in teaching. The supervisor sits in the class as the teacher teaches and may use a video tape, audio-tape or pen and paper to record his observations.

3. Analysis and Strategies Stage/Phase

The supervisor and the teacher separately analyse the teacher's performance. He gives the teacher a copy of the script about his observation and the teacher studies it. A time is appointed for the supervisor and the teacher to meet together and discuss the points about the teacher's performance.

4. Post Conference Stage/Phase

The supervisor and the teacher sit together to analyse the teacher's performance. Other participants may join them if the need arises. The supervisor analyses the strengths of the teacher and asks the teacher about how he feels about his own performance. Both of them accept the weak points and the strengths of the teacher. The important element here is trust. Both of them try to find solutions to the problems faced by the teacher. To do this, the supervisor asks the teacher to suggest some solutions to the problems. They mutually discuss alternative strategies to be adopted.

5. Post Conference Analysis

At this stage the supervisor analyses his own script and asks the teacher about his feelings at the post conference phase. He does this to see who initiated the discussion, who presented objective data, who created alternatives etc at the post conference phase.

Clinical Supervision and Effective Classroom Teaching

Clinical supervision enhances the classroom image of a teacher. It equips the teacher with all the essential characteristics of good teaching. Some of which are enumerated as:

- a. Having a positive relationship with the students;
- b. Enjoying working with students;
- c. Dealing with students' emotions in a gentle way;
- d. Maintaining discipline and control in the classroom;
- e. Creating a favourable environment for learning;
- f. Recognising and providing for individual differences;
- g. Obtaining students' involvement in learning;
- h. Being creative and innovative;
- i. Emphasising teaching of reading skills;

- j. Giving students a good self image;
- k. Engaging in professional growth activities;
- l. Knowing subject matter in depth;
- m. Helping the teacher to be flexible;
- n. Helping the teacher to be consistent; and
- o. Displaying fairness.

Conclusion

All said, a light is shed on what clinical supervision is all about. The question is whether our supervisors are practising it or not. Looking around and noticing what is happening, the image projected is that almost all supervisors act as inspectors. Better still, most supervisors act as administrators. However, being an administrator and being a supervisor are two different things. To make this point clear, it would be nice to use the term known in supervision as 'skill mix'.

The skill mix is prevalent in all professions and is of a threefold nature according to Alfonso et al (1978). This includes — human, technical and managerial skills involved in the profession. According to Alfonso et al, a supervisor's emphasis is in the area of technical (60%) and human (about 30%). It means that he needs only about 10-15% of managerial skill. The clinical supervisor, therefore, should be an individual who knows how to get things done along with

the teacher. He is not the one who scares teachers. He considers himself as a friend; so compassionate and sympathetic that he understands what a teacher goes through emotionally.

It is high time that we broke away from the shackles of the old time practice of inspection — the time when teachers were afraid of supervisors. It would be nice for seminars to be conducted in this area so that superintendents, principals etc would be reminded that the old trend is gone and that the adoption of a new system will help us achieve our educational aims and objectives.

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January, 1999.

REGISTRAR

Intraorganisational Changes for Libraries

M. Masoom Raza*

Introduction

Organisational change is departure from the status quo or from the conventional trends. Organisational change for libraries could signify adoption of a new computer and information system, starting new services for their clients, restructuring the organisation to create new positions, redefining the purpose and mission of the organisation etc. The changes which take place inside the organisation such as introducing computers and machines to automate existing operations, changing the incentive and promotion policies, recruiting technologically skilled staffs, introducing benchmark standards in libraries for total quality management are called intraorganisational changes. The fast changing nature of today's organisational environment is predominantly the consequence of two factors :

- (1) Increased effectiveness of information technology which encompasses both communication technology as well as computing technology.
- (2) The increased effectiveness of transportation technology.

Changing Organisational Environment

1. Library collection no longer consists of only printed materials such as books, magazines, newspapers, pamphlets, reports, maps etc but with the advent of information technology, the new and repackaged published information & new formats of non print such as Video Disks, CD-Roms, OPACS replacing traditional card catalogues, allowing access to the holdings of libraries by interested users in remote access.
2. Computer software programs such as word processing, database creation & spread sheets with dot matrix & laser printers helped in creating new information resource within & between libraries.
3. Computer programs required telecommunication connections including those for online searching capabilities, Internet, telefacsimile, E-mail and bibliographic utilities.
4. The accelerating increase in number of science publications as recorded by De Solla Price (1963) was approx. ten fold in 50 years. Later Bell (1979) reported that estimates of number of science journals ranged between 30,000-10,00,000. The rate of knowledge generation compared as information explosion in the 20th century. The information *de facto* multiplying geometrically made technophobic librarians handicapped by outdated the conventional library practices.

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Hence the only option for them was to adopt knowledge distributing technology befitting the geometrically increasing knowledge base which will result in knowledge environment.

Organisational Levers for Change

Change is a social process and a healthy sign of progressive development but it needs support, co-operation and enthusiasm of the organisations members to make any attempt successful. The members with the sense of *esprit de corps* should respond to the changing environment positively. The change in any organisation is broadly classified as (1) Content of change (2) Process of change. The four identified areas which constitute the content of change are technology, marketing, quality and costs. In order to bring about changes in these, organisations need to change three other aspects. These three aspects determine the process of change. In toto the eight organisational aspects which constitute the levers of change as identified by V. Nilakant & S. Ramnarayan are — (1) Leadership (2) Strategy (3) Structure (4) People Management (5) Technology (6) Marketing (7) Quality (8) Costs.

Leadership is the driving force behind the organisational change but the successful organisational change requires synchronous attention to both the content and context of change through value based leadership. According to Adam Smith, virtue comprises three elements: propriety, prudence, and benevolence. Propriety referred to the appropriate control and direction of our affections, prudence implied the judicious pursuit, and benevolence constituted those affections that encourage the happiness of others.

Conclusion

The explosion of information, globalisation, liberalisation of many markets, rapid technological change, and discontinuities in previously predictable patterns of change create both threats and opportunities for organisation. Organisational theory and managerial wisdom advocate that for the survival of any organisation, the nature of organisation must be compatible with the environmental change otherwise it will lead to organisational decline. So the best strategy for the libraries in this changing scenario is first to temporarily rely on slack resources and finally adopt the environmental change for their improvisation, betterment and survival.

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Education in an Era of Globalisation

Shri Atal Bihari Vajpayee, Prime Minister of India delivered the Convocation Address at the seventeenth convocation of Sri Sathya Sai Institute of Higher Learning. He said, "Thanks to globalisation, issues such as management of the economy, stability of national currencies, trade and investment, environmental protection, harnessing of natural resources, regional and global security, etc, are no longer exclusively national concerns. They call for increasing global cooperation among nations. As we all know, modern education — especially that imparted in reputed universities in India and abroad — is constantly upgrading itself, to understand these issues in a global perspective and suggest appropriate responses.

However, there is another set of problems facing the world in the era of globalization, which modern education has largely bypassed. These are problems arising out of the neglect of the ethical, cultural and spiritual upbringing of people." Excerpts

The Indian tradition believes that Truth or *Sathya* is God. As the Sai model of education affirms, the students of this university are not just students, but seekers of Truth. The divine guidance of Bhagavan Sathya Sai Baba has, thus, elevated even education to the level of worship of God.

The very name of this institute explains its purpose and its mission, namely, that it is a centre for Higher Learning. Usually, this term "centre of higher learning" means a university or a specialized institution that provides a relatively advanced level of education. The word "higher" means more of the same thing; it does not connote a different paradigm of learning.

Sri Sathya Sai Institute of Higher Learning, however, imparts education that truly belongs to an altogether higher category of human quest. It is an experience of learning that is holistic and based on a deeper understanding of Man and his purpose of being.

Our scriptures have defined *mukti* or liberation to be the goal of education — *Sa vidya yaa vimuktaye*. Liberation not after

death, but on this very earth and in this very life. The vidya imparted in the Sathya Sai Vishwa Vidyalaya is of the liberative kind. It addresses both the *apara* and *para* aspects of man and society.

It pursues the knowledge of the material world and the outer environment. Equally importantly, it also trains the students in the spiritual heritage of the world and refines their knowledge of man's inner environment. The higher learning, which the pupils here seek, and receive, facilitates their integral development.

This integration of worldly knowledge and spiritual values makes the students more competent to handle the complex challenges of the professional world they will now enter. At the same time, it also enables them to become better human beings with a finer, culturally richer character.

The Sathya Sai Institute of Higher Learning, thus, meets the high ideal that Swami Vivekananda had set for education in India: Man-making and Nation-building.

The Indian view of education

aims at an even higher ideal. It seeks to equip the students for the task of not only nation-building, but also world-building. This ideal is far more relevant today in the age of globalization than it ever was in the past.

"World-building" as an ideal of education may seem grandiose, especially in the context of the numerous problems in our own country's educational system. But all those who understand education in its true sense are well aware that education today must address not only national concerns, but also pressing global concerns.

At no time in history has the world been so inter-connected and inter-independent as it is today in the age of globalization. The problems being faced by people in different parts of the world are becoming increasingly common. These problems may show local forms and manifestations. However, very often they have global roots. Naturally, their solution also requires a global approach and a global effort.

The convergence of the local and the global is true not only for problems in the economic sphere. It is increasingly visible even in issues relating to culture, religion and social customs.

How has modern education responded to this new reality? It has begun taking note of the phenomenon in the material sphere, but it has scarcely started to grapple with the issues in the moral sphere.

Let me illustrate. Thanks to globalization, issues such as management of the economy, stability of national currencies, trade and investment, environmental protection, harnessing of natural resources, regional and global security, etc., are no longer exclusively

(Contd. on page 16)

Education India — 4

Progress of Out-turn at Diploma Level in Engineering and Technology

Discipline	All India						
	1986	1987	1988	1989	1990	1991	1992
1. Civil	16,305	17,168	16,084	17,011	15,829	15,337	14,413
2. Mechanical	12,514	13,921	13,945	14,396	14,510	14,592	14,264
3. Electrical	8,281	8,228	9,350	9,393	9,547	10,362	7,545
4. Chemical	387	511	580	708	693	727	561
5. Telecommunication	2,776	4,236	4,360	5,456	6,524	7,357	6,903
6. Metallurgy	215	219	283	266	218	213	208
7. Mining	488	499	579	554	471	420	471
8. Automobile	645	1,094	1,123	1,238	1,496	1,741	1,764
9. Agriculture	47	51	57	73	132	116	124
10. Hotel Management	194	184	356	410	439	321	393
11. Leather Tech.	117	182	151	124	69	98	72
12. Production	223	281	340	430	432	428	435
13. Textile Tech.	1,057	1,384	1,290	1,044	989	836	833
14. Printing Tech.	462	450	448	420	456	526	366
15. Others	6,679	8,152	7,283	8,602	11,989	12,251	15,536
Total	50,390	56,560	56,229	60,125	63,794	65,325	63,888

Source: Manpower Profile India Yearbook 1998, Institute of Applied Manpower Research, New Delhi.

Progress of Out-turn at Degree Level in Engineering and Technology

Discipline	All India						
	1986	1987	1988	1989	1990	1991	1992
1. Civil	7,994	7,752	9,107	8,198	8,753	8,514	8,147
2. Mechanical	7,223	7,247	8,203	8,054	9,410	9,257	9,338
3. Electrical	3,623	3,653	3,970	4,831	5,008	5,399	3,716
4. Chemical	1,235	1,320	1,253	1,739	1,616	1,734	1,587
5. Telecommunication	4,162	4,109	4,693	5,457	5,083	6,746	7,322
6. Metallurgy	523	515	499	464	524	497	469
7. Mining	360	318	315	322	318	348	336
8. Automobile	66	78	106	220	130	154	207
9. Aeronautical	76	65	68	56	63	58	75
10. Agriculture	165	180	155	155	203	202	164
11. Production	536	326	588	868	913	1,112	1,030
12. Sugar	76	—	—	16	15	15	15
13. Oil Tech.	38	40	43	47	59	45	46
14. Textile	431	446	477	424	521	459	414
15. Architecture	567	543	702	770	806	815	743
16. Food Tech.	57	41	47	22	49	29	43
17. Instrumentation	300	282	286	434	632	863	845
18. Ceramics	37	34	42	45	49	62	60
19. Leather	17	48	26	32	28	43	45
20. Others	1,805	3,081	3,284	5,461	7,284	8,372	9,139
Total	29,291	30,078	33,864	37,615	41,464	44,724	44,141

*Estimated.

(Contd. from page 13)

national concerns. They call for increasing global cooperation among nations. As we all know, modern education — especially that imparted in reputed universities in India and abroad — is constantly upgrading itself, to understand these issues in a global perspective and suggest appropriate responses.

However, there is another set of problems facing the world in the era of globalization, which modern education has largely bypassed. These are problems arising out of the neglect of the ethical, cultural, and spiritual upbringing of people. If we take a historical view of the development of the human race, we cannot but ask ourselves some deeply disturbing questions, which are relevant to all countries, not just to India.

Where is man in all the breathtaking progress in technology, communication, and commerce in the 20th century?

Why are love, empathy, cooperation, and adherence to truth missing in today's quest only for material pleasure?

Where is character and compassion in the pursuit of comfort? Where is integrity and inner purity in the pursuit of prestige and power? Where is God-consciousness in the world of gizmos?

The social fabric in all nations of the world, including in traditional societies like India, is coming under increasing strain due to this imbalance in human development. If education continues to neglect this imbalance, the consequences for us in India and for the entire human race would be ruinous.

In this context, the words of Bhagavan Sathya Sai Baba strike the right note of caution. "As science develops and technology ad-

vances, humility and mutual love should also develop to the same extent; otherwise man becomes a menace to man. Education is no education unless it extracts the milk of human kindness, kinship and brotherhood, and makes for a universal diffusion of this feeling, administering at the same time, an intensive as well as extensive knowledge of true nature of man and human society".

The higher learning that your Institute pursues and imparts is "higher" precisely because it integrates all the concerns of humanity in the age of globalization. It is a new experiment in education that is deeply rooted in Indian soil and culture and philosophy, and yet, has a universal appeal.

Friends, when we say we need education that is rooted in Indian soil and culture, we do not mean teaching or promoting the tradition of any particular religion. *Sarva Pantha Samabhava* is the defining principle of Indian culture. Our country has always respected the spiritual heritage of all religions. Bigotry in education and anywhere else is unthinkable in India.

This ideal is best illustrated by the emblem of Bhagavan Sathya Sai Baba's establishment itself, which depicts the symbols of all the world's religion. There is no other country in the world where you can see such a sight.

Rooting our education system in Indian soil and culture also does not mean going back to some ideal or practice of the past, or shutting one's eyes to the positive achievements in education around the world. The right approach in this matter has been incisively stated by Maharshi Aurobindo in his essays on "National Education."

He writes: "We cannot be satisfied with a mere revival of some past principle, method, and sys-

tem that may have happened to prevail at one time in India, however great it was or in consonance with our past civilization and culture. That reversion would be a sterile and impossible effort, hopelessly inadequate to the pressing demands of the present and the far greater demands of our future".

At the same time, Aurobindo warns us against aping the English or American University education or some variation on them with a gloss of Indian colour. Whatever the difficulty of giving it shape, he says, we need an Indian system of education that is proper to the "developing soul of India, to her future need, to the greatness of her coming self-creation, to her eternal spirit"

I must admit here that, even after five decades of freedom, India is far away from this model of education. Our biggest failure has been the inability of the formal education system to build the character of our students and strengthen their ethical and cultural foundation. In the words of Bhagavan Sathya Sai Baba, "Character is the hallmark of man. A life without character is a shrine without light, a coin that is counterfeit, a kite with the string broken".

Character building comes with a careful and sustained nurturing of *Samskaar* — that is right thought and conduct. Our schools and colleges have, by and large, neglected the development of *samskaar* of their pupils. They focus almost exclusively on imparting information and skills. They place little emphasis on value education, which alone can prepare our students to discern between right and wrong.

The role of teachers in building both the character and intellect of their student cannot be over-emphasised. Unfortunately, owing to both internal and external rea-

sons, our teacher community has not been discharging this role satisfactorily. Our schools and colleges cannot be seen as education factories that mechanically churn out degree holders. After all, a teacher is entrusted with the responsibility of moulding a living and creative mind into a useful citizen and a better human being.

In order to discharge this responsibility well, teachers must themselves be men and women of creativity and character. They should develop a keen interest in study and research, adopt innovative method of teaching and, above all, set a standard for the students with their conduct. Doesn't society have the right to expect this from our teachers?

It is obvious, of course, that value education cannot be imparted by the formal education system alone. Strong family relations and a healthy socio-cultural environment play a far bigger role in shaping the character of our young people. In other words, education is not something that a person receives within the four walls of a classroom and for a specified number of years in school and college. It is a life-long effort at self-development.

How do we attain this ideal of education? This is a question that all of us must ponder over. It is true that the Government has a major responsibility in this regard. I also agree with Bhagavan Sathya Sai Baba's exhortation that "either the Government must have the capacity to educate and reform the people, or the people must have the capacity to educate the Government"

What I wish to stress here is that the people must increase their own capacity and activity to reform the education system. Ideally, the Government's role in education should be limited to broad

policy formulation, regulation, and resource provision, where necessary. For the rest, the various constituents of society themselves must maximise their autonomous activity in the educational sphere.

There is an urgent need for national debate to effect fundamental reforms in education. The aim of these reforms should be to reduce the state's executive and interventionist role in education, and fully harness the human and material resources of civil society. I call upon academic institutions, educational trusts and societies, teachers' and students' association, business organisations, religious and cultural bodies and, of course, political parties to come up with creative solution to the many challenges in our educational system.

Friends, I am not an educationist. However, I have had the honour of having worked with one of the greatest educationists of our time, Dr. Syama Prasad Mookerjee, who was also an eminent national leader. On this occasion, I can do no better than to conclude my speech by recalling the stirring words from the Convocation Address delivered by Dr. Mookerjee at the Nagpur University in 1936, when he was only 35 years old.

"An Indian University must regard itself as one of the living organs of national reconstruction. It must discover the best means of blending together both the spiritual and material aspects of life. It must equip its alumni, irrespective of caste, creed or sex, with individual fitness, not for its own sake, not merely for adorning varied occupations and professions, but in order to teach them how to merge their individuality in the common cause of advancing the progress and prosperity of their motherland and upholding the

highest traditions of human civilization. That constitutes the perennial ideal of a university rooted in the Indian soil and expresses one of the greatest needs of the hour".

I have quoted from the speech of my leader and "teacher" only to express my own appreciation how closely the Sathya Sai Institute of Higher Learning has realised this ideal of an Indian University.

ANNA UNIVERSITY
CHENNAI 600 025

**SC/ST TEACHER TRAINING
PROGRAMME**

**ADVT. NO. 001/PR24/99-TT,
DATED 05.01.1999**

Applications are invited in the prescribed form, from candidates belonging to SC/ST for recruitment as Teacher Trainees.

Qualification : B.E./B.Tech., with First Class or CGPA greater than 6.5.

Stipend : Rs. 2,000/- per month.

Age Limit : Below 27 years as on 1.7.98.

Training period : 3 years.

Area of Training : Environmental Engineering/Internal Combustion Engineering/Computer Science & Engineering/Chemical Engineering.

On successful completion of training and on acquiring Master's degree (part of training) with First Class or CGPA greater than 6.5, the trainees will be considered for direct appointment as Lecturer in the scale of pay of Rs. 2200-75-2800-100-4000 (pre-revised).

Application forms and other details can be had on requisition accompanied by Demand Draft for Rs. 100/- (Rupees one hundred only) dated not earlier than 21.1.99 in favour of the "Registrar, Anna University, Chennai-25" together with a stamped self-addressed envelope (Rs. 6/-) of size 22 cm x 10 cm.

Last date for the receipt of completed application is 01.03.99.

Note : 1. The students, who are appearing for final semester/year examination and likely to successfully complete their B.E./B.Tech. Degree securing First Class or CGPA greater than 6.5 by May 1999, can also apply.

2. For each area of training, separate application is needed.

REGISTRAR

CAMPUS NEWS

Poverty Hampers Education

The Prime Minister, Mr. A.B. Vajpayee, called upon the people to address the problem of poverty, if the nation was to achieve total literacy. He was inaugurating the Polytechnic for the Physically Handicapped, established by J.S.S. Mahavidhyapeetha in Mysore recently.

Stating that education was crucial for the progress of the country, he said the successive governments at the Centre could not provide basic education to all. The country still lagged behind in women's education. The Centre was looking ahead to double the national food production to meet the food requirements of all sections of the country.

The Prime Minister said widespread poverty had hampered education. The Government was concerned about the plight of the poor and would strive for a situation where no one was left without food. Children could not concentrate on their education when they were hungry. He favoured establishment of more residential schools for the poor children.

He made an ironical suggestion that mere praying to Saraswathi was not enough. "We pray to Saraswathi but make no arrangements to educate our children," he said.

Lauding the work of Basaveshwara, he said the social reformer had understood the importance of education centuries ago and made significant efforts in educating the masses while laying stress on women's education. Veerashaiva maths were now striving to achieve these objectives.

Mr. Vajpayee said the govern-

ments alone could not provide technical education to all and it was still difficult when it came to extend it to the physically handicapped. But with the dedication and service motto of institutions like J.S.S. Mahavidhyapeetha, the task was being achieved.

Praising the services of the Mahavidhyapeetha to start an educational institution (Engineering College) at Noida in Uttar Pradesh, he said the Uttar Pradesh government would extend all possible support for their establishment.

The Chief Minister, Mr. J.H. Patel said the efforts of the JSS institutions were unique and noble in providing education to the disabled.

The Veerashaiva maths started educational institutions about 100 years ago. These were the only institutions serving society for long with the same missionary zeal as that of Christian educational institutions.

The Governor, Mr. Khurshed Alam Khan, laid greater stress on educating women. Stating that the literacy rate in the country was as low as 0.6 per cent at the beginning of this century, it had now increased to about 47 per cent. There were many weaker and backward sections which lacked basic education, he said.

Commending the services of JSS Mahavidhyapeetha, he said the polytechnic should now provide an opportunity to the disabled to take advantage of the technical training to become useful citizens. The physically handicapped could be effectively trained for constructive purposes. There were about 3.5 lakh physically handi-

capped people in the State who could take advantage of such institutes.

He described the Mahavidhyapeetha as the institution spreading the light of education with dedication.

Sri Shivarathri Deshikendra Swamiji of Suttur Math described the polytechnic as yet another milestone in the educational history of the country.

Infotech and Knowledge Society

"Ensuring equity in access to modern Information Technology" formed the crux of the deliberation at a symposium on informatics in the emerging "Knowledge Society" organised by the Ranganathan Centre for Information Studies (RCIS) in Chennai recently.

While economists expressed doubts over the capability of Information Technology to offer solutions to the country's basic problems like illiteracy and poverty, technocrats and professionals felt that it may not solve them, but the creation of an I.T. infrastructure that could reach out to the common man, could certainly address them. Providing an inexpensive I.T. infrastructure could spread education through satellite communication or obtain land records, they explained.

The founder patron of the RCIS and former Governor of Maharashtra, Mr. C. Subramaniam, spoke on another dimension to the emerging knowledge society. "If the present socio-economic disparities in India were allowed to continue, but the knowledge and awareness of the masses increase, then would it not be a fertile ground for a revolution," he asked.

Mr. Subramanian said the I.T. tools, such as the Internet, should be used to solve, on a sustainable basis, the human problems of the world, including global environmental degradation.

However, the President of the U.S. Academy of Sciences, Prof. Bruce Alberts, felt that India, with its basic strength of democracy, had a head-start in creating a knowledge-based society. He said I.T. connectivity and networks could help in more collaboration among scientists of India and the U.S.

Later participating in a discussion on whether I.T. had failed a traditional society, economists and economic writers, questioned the rationale for laying much emphasis on I.T. and its related investment. In a society, where 75 per cent of the population, including the urban poor were out of the mainstream, could I.T. make a difference without access to the technology or ignorance of English? Only a small elite segment might stand to benefit in an I.T.-based environment, while for the poor, everyday survival was a bigger problem.

They also wondered why the I.T. industry in the country did not develop software for agriculture, education or poverty alleviation. Also, there was no common standard for programming or accessing information in Indian languages, though some efforts were under way.

Countering this analysis, the Director of the Centre for Artificial Intelligence and Robotics, Dr. M. Vidyasagar, said lack of databases for these critical areas was a major problem in India. If the data was available and if there were assured takers for such databases, the I.T. industry would not hesitate to address these issues. The more important aspect was the need for higher bandwidth to ensure universal connectivity.

Addressing another session on "what went wrong with our information infrastructure", Prof. Ashok Jhunjhunwala of IIT-Madras, said at present a telephone connection cost Rs. 35,000 for installation, which meant a Rs. 900 monthly bill for the consumer. But, with the indigenous technology developed at the IIT, this could be brought down to Rs. 12,000 or Rs. 15,000.

Dr. T.H. Chowdary, Centre for Telematics Management and Studies, Hyderabad, explained the revolutionary changes occurring in the area of hi-speed communication. A single optic fibre cable could now facilitate millions of simultaneous telephone conversations.

Among those who spoke on the occasion, were Dr. S. Ambirajan (Madras School of Economics), Dr. R.K. Shyamsundar, TIFR, Mumbai, Prof. P. Balaram, Editor, Current Science, Maj. Gen. A. Balasubrahmanian, an I.T. professional, Prof. M. Anandakrishnan, Vice-Chairman, TN State Council for Higher Education and Prof. R. Natarajan, Director, IIT-Madras.

Dr. Brian Heath, Foreign Secretary of the Royal Society, U.K., spoke on the growing importance of bio-informatics, a new discipline born out of the "marriage between biosciences and the computer", which tried to create a database of the human genome and its diversity.

Jai Vigyan National Mission

The Union Minister for Human Resource Development, Dr. Murli Manohar Joshi, said that scientific institutions would take up 21 important development projects as part of the Jai Vigyan National Mission with focus on science and technology.

These projects would be in areas such as food security, energy

conservation, health care, disaster management and bio-diversity. Scientific and R and D institutions would take up one project in 1999.

The Minister said he had directed the Department of Bio-technology to institute 10 awards every year for outstanding young scientists in biosciences.

This would encourage high-quality research of excellence and relevance, he said.

As achieving excellence was dependent on innovative talents, which in turn needed identification and nurturing from an early age, a new scheme to select under-18 youngsters of outstanding talent and to provide them with necessary ambience and opportunities for harnessing their talent had been instituted. These youngsters would be supported with substantial scholarship for education in science.

An information technology Action Plan had been formulated envisaging "IT for All" within a period of 10 years.

The Department of Space was taking initiatives to set up space museums and space parks in different parts of the country to arouse the curiosity of youngsters in the area of space science and technology.

Large space museums in metropolitan cities would have full scale models of Indian satellites and launch vehicles, interactive space exhibits, space theatres, etc. In smaller cities, there would be medium class space centres, he said.

CBSE Launches IT Package

As the nation with its prowess in software steps in the Information Age, the Central Board of Secondary Education (CBSE) is launching a holistic vocational package in Information Technology Applications.

The programme, which is to be initiated in schools from March, could yield a middle-level job in the software industry. Besides, the Board has decided on implementing a scheme of comprehensive school-based evaluation from 2000. It has also initiated "Operation Mathematics" to stem the disinterest in mathematics for improving upon the dismal results in the subject.

"The IT Applications, a total vocational package to start from Class XI, has all modern relevant computer knowledge for students to get middle rung jobs such as data operator and programming assistant in the industry," said Mr. G. Balasubramanian, Director (Academic). The curriculum for the course has been developed in consultation with the IT practitioners and software industry. This was since the Computer Applications course had become obsolete and no longer relevant. The technology had gone up, making Basic and MS Word which was being taught, useless, said Mr. Balasubramanian. Three papers, Information Technology Systems, Business Data Processing, DTP and Multimedia are in the course.

The Director said the students could pursue B.E. or B.Sc Computer Sciences after completing the course. "The course has half the skills imparted at the B.Sc Computer Science level. It is at a level more than the DoE "O" level and could thus help one get a middle level job in the industry.

Besides, the CBSE also started an elective paper on Informatics Practices in 1998, which is a compendium of software packages designed to empower learners with abilities to use computers effectively. It is a curriculum based on latest applications of software packages including MS Windows, Foxpro, Electronic Spread Sheet, Internet and Websites.

The school-based evaluation

in Class X would reveal the students' personality by evaluating health, personal and social qualities, attitudes and values, activities such as creative writing and capabilities in music, dance and drama.

Thus ignored but critical area of the student's personality would be brought within the purview of evaluation. This evaluation would be crucial in the years to come, since the marks certificate would be inserting a reference to this evaluation, said Mr. Balasubramanian.

Besides, the Boards' ongoing "Operation Mathematics" is aimed at stemming the students' "fear psychosis" towards mathematics, in which there is a 50 per cent failure rate. The psychosis towards the subject is planned to be arrested by improving upon the content, pedagogy, teacher training and making learning maths interesting, by organising mathematics competitions and events. An intensive teacher training programme is underway for teachers at the senior school and secondary levels. A Sahodaya School Cluster, which has 110 schools countrywide in clusters of eight to ten schools each, has been formed specifically for this purpose. Each cluster would organise mathematics competitions, quizzes and melas.

ICF Annual Conference

The sixth annual conference of the Indian Colleges Forum held in Bangalore recently, has recommended linking all universities in the country and all colleges to the university concerned, through internet. According to the Forum President, Dr. K.E. Radhakrishna interlinking of universities would eliminate unnecessary delay, boost information dissemination, strengthen exchange of knowledge, tone up administrative efficiency and be cost effective.

He said that the conference

has recommended setting up of human resource development centres in colleges to coordinate the National Service Scheme, National Cadet Corps, sports, students' welfare, students' counselling and extra-curricular activities. It has also recommended introduction of compulsory community service projects during vacations in the curriculum.

Considering the hardship for students to watch UGC educational programmes on Doordarshan, the conference has recommended setting up of an exclusive national television channel for education, he said. Setting up of an educational research centre by UGC, introduction of technological gadgets in education, encouraging inter-department and inter-disciplinary programmes, permitting only autonomous colleges in future were among the other recommendations made by the conference, Prof Radhakrishna said.

He said the conference also passed resolutions like fixing uniform pay-scale for principals, to review and rationalise the pattern of grants to universities and colleges, to provide scope for inter and intra-disciplinary studies, to provide assistance for introducing new technology in education, to make employees accountable for their tasks, to give autonomy to universities to fix working days at not less than 200 days in an academic year and to train principals in finance and management.

Amartya Sen Honoured

"Unhappiness is the most creative thing that can happen in a state of social injustice," said Nobel laureate Amartya Sen. He made his observation about "creative dissatisfaction" and "how social conditioning influence perceptions of illness and health" while speaking at a special convocation organised by the Jawaharlal

Nehru University to award him an honorary doctorate.

Emphasising that human perceptions regarding their actual state is relevant to the issue of social science and social justice, Prof. Sen spoke of "systematic conditioning of public health concerns."

In his extensive writings on the theory of social choice, Prof. Sen had raised critical questions regarding the acceptability of the majority principle as a workable decision rule besides comparison of welfare distribution in different societies.

Agreeing that perceptions are not necessarily accurate and often subjective, he referred to cases when they do become the ultimate science. "In case of pain, this is true," he said.

"In states like Kerala, there is a low rate of mortality but it has the highest perception of morbidity. Whereas in Bihar, it is the opposite though there are high rates of mortality but it has the lowest perception of morbidity," the professor said. He pointed out that the better public health facilities in Kerala helps people "perceive illness much more easily" while "in other places, people often take it to be a human predicament." This lack of perception of inequality was a characteristic of gender equations as shown by even social responses specially in an Indian context, he said.

"These are the difficulties generated by social arrangement and in part are reflection of social arrangement. The fact that there is a lower perception of illness is part of the problem. The process of cure of ill health has to incorporate the process of awareness of all health," he said.

Earlier addressing the gathering, the Vice-President, Mr. Krishan Kant, described the Nobel laureate as one of the most distin-

guished exponents of the economics of social justice in the academic world.

"His prodigious research has not only restored to developmental economics the prestige which was its due, but has also presented to the policy-planner a road-map about policy options. His advocacy of making use of social opportunity and market opportunity simultaneously to transform life on this planet has brought into sharp focus the importance of human resource development through literacy, education, health-care, land reforms and equity," Mr. Krishan Kant said.

Comparing Prof. Sen's work to Mahatma Gandhi's constructive programme for building the foundation of free India, the Vice-President said "no one would have been more pleased by what Prof. Sen has to say and commend than Gandhiji". "It took the genius of an Amartya Sen to put in a theoretical and policy perspective the ethos which permeated our freedom struggle. In reminding us that it is possible for a society to command a superior quality of life with relatively slower growth of GDP and per capita income, Prof. Sen has kindled the hopes of the poor of finding a means to utilise their limited resources for extraordinary results."

DU Confers D.Litt on Amartya Sen

India doesn't need to emulate China when it comes to political freedom, but it can definitely learn lessons in economic freedom, says Amartya Sen.

"The Chinese have made skillful use of the market," he said, while addressing a function organised to felicitate and confer an honorary D.Litt degree on Prof. Sen, which was done in absentia last month by the Vice President and university Chancellor Krishan Kant.

Prof. Sen talked at length of his book under print, *Development as Freedom*. He said freedom is not just the ultimate end of development. "When it comes to fostering development, freedom comes as a means," he said.

Quality of life depends on enabling freedom which ensures proper education and health care. Political freedom is important for the opportunity it provides to express oneself and help others. Economic freedom promotes efficiency, while transparency freedom gives us the right to see we are not being cheated. Protective freedom helps us generate income when there is a calamity, flood, drought or something which leads to loss of jobs.

Listing all these he dwelt upon their relevance in the current circumstances. "A great achievement of China is enabling freedom. Population at large could be drawn into the process of market reform because of proper education and health care provided before it," he said. He said the country, however, lacked in political freedom.

"Political freedom is missed when things go wrong. Collective power of democracy is badly missed during these times," he said. Elaborating on protective freedom he said, "It's absence in Russia led to dramatic rise in mortality." Importance of transparency freedom has been realised particularly in the context the financial irregularities in south Asia.

"So far, I had underestimated the evil of corruption," he said. His other book in print is about freedom and social choice.

Earlier, university vice-chancellor V.R. Mehta welcomed him as "one of our own".

Dr. Mehta said in hundreds of papers, Prof. Sen has explored more topics relating to human rationality, justice, freedom, devel-

opment, gender rights, social welfare than one can list. "All his work has managed to combine technical sophistication, with a deep ethical commitment in a manner that is almost unique in the twentieth century," said Dr. Mehta.

Calling him the "renaissance man", Dr. Mehta said the guiding vision behind Prof. Sen's achievements is in the best traditions of enlightenment — it has stood against all obscurantism and undeserved privilege, two forces which are still an ominous threat to the society.

Later at a felicitation function at the Delhi School of Economics, Prof. Sen said he was "delighted and moved" to be back at his decade long laboratory of research. "Teaching at Delhi School of Economics were some of the memorable days of my life," he remarked. Many of his works like choice of technique, collective choice and theory of social welfare were results of his deliberations at the Delhi School of Economics, he recalled.

Unity of Religions

The Research Foundation for Devotional Literary Studies of Osmania University had organised in October 1998 a seminar on Unity of Religions. Amongst other things the seminar constituted a committee to recommend measures towards unity of religions. Though happy to note the progress of science & technology that helped the world in creating suitable atmosphere for prosperous life, the Committee felt that without ethical and spiritual life, the progress of Science & Technology might lead the world to destruction. It has therefore stressed ethical and spiritual outlook.

To maintain and strengthen the unity of religion i.e. love and respect for all religions, the committee is of the view that the fol-

lowing measures would be helpful:

1. Study of comparative religions and cultures should be promoted. Seminars, conferences and lectures should be arranged. Common prayer/meditation halls should be established.

2. People of different religions should be involved in social work, programme of environmental protection, plantation, cleanliness, health, hygiene, community service, blood donation, child welfare etc, to promote mutual harmony.

3. Art and culture bring people together. Therefore programmes in music, dance, drama, literature both in classical and folk forms should be arranged.

4. Political interference should not be permitted in the places of worship.

5. Change of religion for the sake of political and economic gain should be discouraged. Economic benefits should not be based on religious affiliation.

6. Religion has nothing to do with lawlessness and terrorism. Religious heads should be requested to take practical measures

to minimise the threat of terrorism and fundamentalism.

Bharat Gaurav Award for Prof. Joshi

Industrial Economic Forum, New Delhi has conferred Bharat Gaurav award on Professor U.C. Joshi of the Army Cadet College Wing, Indian Military Academy, Dehradun which is a recognised institute of JNU. Professor Joshi has been honoured for his academic excellence and commendable services in his field of activity. This award is given to eminent national personalities in the field of education, science & technology, literature, theatre and industry. The earlier awardees in the field of education include Dr. A.R. Kidwai and Prof. D.M. Manjunatha.

We Congratulate...

1. Sri N. Sankar who has taken over as Vice-Chancellor of Sri Chandrasekharendra Saraswathi Viswa Mahavidyalaya, (Deemed University), Kanchipuram.

News from Agricultural Universities

Networking Veterinary Institutions

A project to network institutions of agriculture and veterinary sciences in the country is proposed to be implemented within five years. Over 5,000 computers and allied equipment would be provided to the institutions for not only local area networking (LAN) but also wide area networking (WAN). The World Bank-assisted Rs. 1,000 crore programme "National Agricultural Technology Project" had received the necessary Cabinet clearance. This was revealed by the Director General,

Indian Council of Agricultural Research (ICAR), Dr. R.S. Paroda, in Chennai recently.

Inaugurating the Agriculture Research Information System (ARIS), commissioned at a cost of Rs. 44 lakhs at the Tamil Nadu Veterinary and Animal Sciences University (TANUVAS), he said the programme would have a field-based approach.

The objectives would be to address research and development issues relating to the needs of

farmers, encompassing the other wings of the government, such as the agricultural cooperatives and the fertilizer and irrigation departments. It aimed to bring in a culture of partnership among government agencies, research institutions and farmers.

The project was targetted at revamping the present system to bring in a more decentralised approach. Over 15,000 persons drawn from the institutions would be provided training to ensure that the system was put in place.

In order to promote farmer participation in the programmes, scientists would be asked to spend at least 20 per cent of their time with farmers and assess the compatibility of the technology before its transfer from the laboratory to the field. A new "Institute Village Linkage Project" would be launched and 70 villages having a population of 1,000 farmers each would be adopted by the institutions for evaluation, periodical interaction and appraisal on scientific inputs furnished to the farming community. Research institutions, such as the agricultural universities and ICAR units, would also provide a single-window enquiry system for farmers. About Rs. 15 crores would be provided as revolving funds to the institutions for the generation of seeds for distribution.

Responding to the Vice-Chancellor, Dr. R. Prabakaran's plea for considering the university as a "Human Resources Development Centre" for manpower training, Dr. Paroda assured that he would recommend it as a "Centre of excellence" for the programme.

Dr. Prabakaran, who presided, said the university had over 750 trained faculty members for conducting manpower training programmes. ARIS cells would also be

established at the Namakkal Veterinary College and the Fisheries College at Tuticorin.

The Deputy Director General, ICAR, Dr. Anwar Alam, detailed the salient features of the project. Dr. Alfred Jayaprasad, Dean-Incharge, Dr. R. Natanam, Registrar, and Dr. G. Thulasi, Head, ARIS cell, were among those who spoke.

Improving Indian Agriculture

To work out a new package of agricultural policies and programmes, the Institute of Development Studies (IDS), Jaipur is reported to have launched a comprehensive all-India research project on agricultural sector reforms with financial support from Australia.

The research project on "Equity driven trade and marketing policy strategies for improved performance of Indian agriculture" has been undertaken with two collaborating institutions from Australia — University of Wollongong and University of Sydney — besides the New Delhi-based National Centre of Agricultural Policy Research and Indian Agricultural Research Institute.

The IDS Director, Prof. S.S. Acharya, who is also the project leader of the joint Indo-Australian study, said the project, while suggesting measures for improving the efficiency of resources, would also take into account the equity aspects, such as their impact on levels of poverty, improvement in the food security and reduction in inter-regional disparities in development.

Dr. Acharya said the project would be financially supported by the Government of Australia through the Australian Centre for International Agricultural Re-

search, Canberra. The total cost of the research project will be Rs. 40 lakhs for two years.

The approach to agricultural sector reforms in the country has so far remained cautious and gradual because of concern for the poorer sections of society and food security for masses, though structural changes in the policies are necessary for improving the performance of agriculture.

According to Dr. Acharya, who was earlier Chairman of the Central Government's Commission for Agricultural Cost and Prices, the agricultural policies currently in vogue are being questioned on three main accounts : (i) the growing scarcity of natural resources; (ii) the high level of input intensity in irrigated areas; and (iii) the declining public investment in agricultural sector.

The current market intervention policies are also being rigorously debated in the wake of new international trade agreement under the World Trade Organisation because of their adverse impact on food security, levels of poverty and regional disparities in development.

Dr. Acharya said there were three viewpoints on this : first, both agriculture and economy would suffer unless the agricultural sector is liberalised; secondly, the poor will suffer and poverty may increase if full forms of economic reforms are introduced; and thirdly, the current adhocism in agricultural marketing policies is doing more harm than good.

Given this scenario of divergent views, the objective of the comprehensive study will be the research of a package for agricultural trade and the policy reforms which would, while improving efficiency, take into account the

concern relating to food security, poverty and regional discrepancies.

The project, of two year-duration, has been divided into five sub-projects, namely, the trade liberalisation and equity, domestic market integration and policies, State-level terms of trade for agriculture, agricultural performance and productivity, and rural poverty, equity and rural employment under liberalisation.

The main crops to be covered in the study are rice, wheat, millet, maize, barley, gram, ground-

nut, mustard, soyabean, cotton, jute and sugarcane, which will cover nearly 80 per cent of the total cropped area in the country.

The agricultural economists of India and Australia who will be collaborating in the study include Prof. D.P. Choudhary and Prof. E.J. Wilson of University of Wollongong; Prof. Z.Y. Zhou of University of Sydney; Prof. D. Jha of National Centre Agricultural Policy Research, New Delhi; and Prof. P. Kumar of Indian Agricultural Research Institute, New Delhi.

solving through group interaction. This exposure to a wide range of management systems and viewpoints, coupled with the acquisition of new skills, enables participants to play a more effective leadership role at their own institution.

Further details may be had from Brian Fijal, Director, CHERD Management Programs, 220 Sinnott Building, 70 Dysart Road, Winnipeg, Manitoba, Canada R3T 2N2.

Symposium on Biological Education

The International Union of Biological Sciences (IUBS), Commission for Biological Education proposes to organise an International Symposium on BioEd 2000 : The Challenge of the Next Century at Paris, France, during 15-18 May, 2000.

For more information and registration, etc please contact : BioEd 2000, MNHN, Grande Galerie de l'Evolution, 36 Rue Geoffroy Saint Hilaire, 75005 Paris, Ph : +33 140 79 39 20, Fax : +33 140 79 39 26, E-mail : laurier@mnhn.fr

Conference on Distance Learning

Cambridge International Conference on Open and Distance Learning is proposed to be organised on 28 September — 1 October 1999 at Madingley Hall, Cambridge, England. The theme of the conference is 'Learning and Teaching with the New Technologies'.

For more details, contact may be established with Penny Stuart, Conference Secretary, Cambridge International Conference, The Open University, East Anglia Region, Cintra House, 12 Hills Road, Cambridge, CB2 1PF, UK. Telephone : +44 (0) 1223 364721, Fax ; +44(0) 1223 355207, E-mail : p.a.stuart@open.ac.uk

News from Abroad

Courses in Varsity Administration

The Centre for Higher Education Research and Development (CHERD) of the University of Manitoba, Canada offers two management development programs designed to address the unique concerns of administrators working in a higher education environment.

These programs are continually reviewed and updated to ensure the curriculum meets the current and future needs of administrators. The programs include :

◆ The Senior University Administrators Course (SUAC), an advanced management program for experienced administrators who are responsible for initiating institution-wide policy.

SUAC has been part of the tradition of higher education administration for two decades, with over 1,000 graduates. With emphasis on the management of change, power and influence in the academic environment, resource management and planning, and legal and ethics issues, the 1999

SUAC program reflects the challenges facing administrators.

◆ The University Management Course (UMC), a management course for administrators with direct responsibility for recommending and implementing policy.

UMC, the first course of its kind offered in North America, is designed to provide an overview of management issues from a broad institutional perspective. With over 1,000 graduates, the program is entering its 19th year. Within the context of managing change and organizational culture, the curriculum examines human rights, administrative and contract law; financial management and budget planning; human resource management; and conflict resolution.

By bringing together participants with diverse perspectives, experiences, and backgrounds, these programs provide a forum for the exchange of ideas and the development of creative problem-

BOOK REVIEW

SKETCHY

S. Sadagopan*

Girja Kumar. *Sociology of Information Management*. Delhi, Har Anand Publications, 1998. Pp.208. Rs. 395/-.

This book addresses librarians and other information scientists. The author argues using an extremely diverse set of ideas the need for librarians to adapt to the emerging world of digital libraries. Being a librarian with many years of experience in Indian libraries, the author quotes extensively from his experience. He tries to bring in fusion across several disciplines ranging from Library Science, Information Technology, Information theory, Strategic Management, Total Quality Management and cybernetic thinking. Such a fusion of too many ideas, though laudable as demonstration of the author's wide reading interests, has not contributed to a unified theme for the book.

Starting with the chapter on "Identity Crisis of Social Institutions" the author pleads for a changed attitude from librarians in the changing world. The second chapter on "Book and Digital Cultures" takes a librarian's view of digital library and argues for the continuance of book culture. The chapters on "Information Society" and "Information Management" talk briefly about many often disconnected subjects. The fifth chapter on "Social implications of Information Technology" outlines

the implications of Internet & World Wide Web for library users. In the chapter on "Creativity in the information age", a number of interesting ideas are outlined. The next chapter on "Total Quality Management" gives a brief account of the many ideas of TQM not necessarily adding special emphasis for TQM use by Librarians. The chapters on "Strategic Management" and "Information Marketing" attempt to summarize some key issues of strategic and marketing management. The tenth chapter on "Philosophy of User Education" throws some light on user needs viewed from many theories of user needs such as Maslow's hierarchy. The last chapter (of the eleven chapters) on "Ethics and Tradition in Management" throws several views on creativity including that of Dr.

S.R. Ranganathan, the father of Library Science in India.

The book attempts to convey too many things to too many people. It is not possible for a single author to address that many issues ranging from Indian philosophy, Ethics, Information Science, Library Science, Information Technology, Corporate Strategy and Marketing that too in a slim volume of 200 pages. While the attempt is laudable the end result is a work with very diffused focus and a disjointed set of ideas often worked out just enough to be termed "sketchy". It is not clear as to whom the book is really intended for.

On the whole the book is an interesting attempt by one of the experienced librarians in India to come to terms with the changing role of librarians in the Internet age. The transition from traditional role librarians have played all these years to the new role that is demanded from librarians of twenty-first century is unlikely to be straight forward but a confusing and even painful change. Maybe this book reflects such a transition.

INDIAN COUNCIL OF MEDICAL RESEARCH

Nominations/applications are invited from distinguished retiring Scientists engaged in research in the field of biomedicine for consideration for appointment as Emeritus Medical Scientist under the Council. Full particulars can be obtained from the Office of the Director General, (Personnel Section), Indian Council of Medical Research, Post Box No. 4911, New Delhi-110 029. Scientists who have retired or are going to retire upto 30th Sept., 1999 may apply for the appointment as Emeritus Medical Scientist under the Council.

Last date for receipt of applications is 28th February, 1999.

—davp 1301 (10) 98

*Professor, Quantitative Methods and Information Systems, Indian Institute of Management, Bangalore.

THESES OF THE MONTH

A list of doctoral theses accepted by Indian Universities (November-December 1998)

HUMANITIES

Geography

1. Ansari, Ajaz Hussain. Socio-economic and ecological impact of Indira Gandhi Canal in Western Rajasthan. (Dr Hifzur Rahman), Department of Geography, Aligarh Muslim University, Aligarh.
2. Deolia, Neeta. Spatial variation in the availability of health services of Mandla, Balaghat and Jabalpur districts. (Dr S K Tiwari), Department of Geography, Rani Durgavati Vishwavidyalaya, Jabalpur.
3. Pawar, Dnyaneshwar Hiral. Geomorphic analysis of Toranmal Plateau. (Dr S M Bhamare), Department of Geography, North Maharashtra University, Jalgaon.
4. Sharma, Madhvi. Urban growth of Surat City. (Dr A Khanna), Department of Geography, Rani Durgavati Vishwavidyalaya, Jabalpur.
5. Siddiqui, Mansoor Alam. Impact of development on the environment of the fringe areas of Aligarh City. (Prof A L Singh), Department of Geography, Aligarh Muslim University, Aligarh.
6. Siddiqui, Samina. Sustainable development of tourism in Uttar Pradesh Himalayas. Department of Geography, Aligarh Muslim University, Aligarh.

History

1. Amarjit Singh. The Muslim League and Punjab politics, 1935 - 1947. Department of History, Kurukshetra University, Kurukshetra.
2. Asha Kiran. Position of Nobles and Chieftains of Indian origin under the Sultans of Delhi. Department of History, Kurukshetra University, Kurukshetra.
3. Balbir Kaur. Rammanphar Lohia: A critical study of his life and work. Department of History, Kurukshetra University, Kurukshetra.
4. Bhattu, Ramesh. Society and culture of Banjaras in A P. Department of History, Culture and Archaeology, Potti Sreeramulu Telugu University, Hyderabad.
5. Chandran, V P. Land and society of Wynad, 1799-1947. (Dr Sebastian Joseph), Department of History, University of Mysore, Mysore.
6. Dwivedy, Tarulata. Peasant unrest in Orissa during 1912 - 1947. (Prof P K Mishra), Department of History, Sambalpur University, Jyoti Vihar, Burla.
7. Dwivedi, Manoj Kumar. Balamiki yugeen Bharat ka rajshastriya anulyankan. Department of History, Magadh University, Bodh Gaya.
8. Pandukumar, B. Arasikere Harnahalli mattu Javagallina Hoysala Devalayagala: Samajika mattu sanskritika adhyayana. (Dr Dayananda Patel T), Department of Ancient History and Archaeology, University of Mysore, Mysore.

9. Rath, Ganesh Chandra. Social, cultural and economic history of Orissa under the Mughals. Department of History, Utkal University, Bhubaneswar.

10. Sarkar, Sukumar. A study of the Imperial Record Department of India, 1891-1947. (Dr J P Mishra and Dr S Sengupta), Department of History, Rani Durgavati Vishwavidyalaya, Jabalpur.

11. Susheela Urs, M. Mysore Odeyara sampradayagala: Ondu samakrutika adhyayana. (Dr Shivanna), Department of History, University of Mysore, Mysore.

12. Sushila Devi, Konjengbam. Origin and growth of Legislature in Manipur upto 1972. (Prof S N Pandey), Department of History, Manipur University, Imphal.

13. Swami, Ramjas. Immigrants and socio political change: A study of Haryana, 1947 - 1966. Department of History, Kurukshetra University, Kurukshetra.

Language & Literature

Arabic

1. Moiduppa, I. A critical and analytical study on the poetry of Al Qurwirasheed Salim Al-Khoori, 1887-1984. (Dr S E A Naqvi), Department of Arabic, University of Calicut, Calicut.

Assamese

1. Basanti Devi. A contrastive study of Assamese and Kannada. (Dr A K Basu), Department of Linguistics, University of Mysore, Mysore.

English

1. Gandhi, Lingaraja. Ngugi Wa Thiong'O and Mulk Raj Anand: A comparative study. (Dr R Ramachandra), Department of English, University of Mysore, Mysore.

2. Sabahuddin Ahmad. Analysis of the errors commonly committed by Urdu-Hindi speaking children learning English. (Dr Mirza Khalil A Beg), Department of Linguistics, Aligarh Muslim University, Aligarh.

3. Solayan, M. A comparative study on the works of Emerson and Thiru Vi Ka. Department of English, Alagappa University, Karaikudi.

German

1. Anuradha, N S. Didaktische Überlegungen Zu Einem Lerngruppenspezifischen Daf Lehrwerk für indische lerner der altersgruppe, 15-19. (Prof V Ganeshan), Department of German, Central Institute of English and Foreign Languages, Hyderabad.

Hindi

1. Ladia, Shashi Kala. Jabalpur ke Hindi kavya parampara ke pariprekshya mein Shri Ram Kishore Aggarwal Manoj, ke vishesh adhyayan. Department of Hindi, Rani Durgavati Vishwavidyalaya, Jabalpur.

2. Narayana, K. Swatantrya poorva adhunik mahakavyon mein parilakshit adhyatmik chetana ka anusheelan: Kamayani ke vishesh sandarbh mein. (Dr M Vimala), Department of Hindi, Bangalore University, Bangalore.

2. Nirmala. Dr Ram Kumar Verma ke natakon mein patra rajana. (Dr R S Pandey), Department of Hindi, Maharshi Dayanand University, Rohtak.

3. Thwari, Asha. Kamayani ke sanggyayon ka arthpuraik adhyayan. (Dr T K Shukla), Department of Hindi, Rani Durgavati Vishwavidyalaya, Jabalpur.

4. Venkatesh, H M. Dinkar ke kavya mein parilakshit sanskritik chetana. (Dr Saragu Krishna Murthy), Department of Hindi, Bangalore University, Bangalore.

Kannada

1. Kulkarni, Mallikarjun Parutappa. Mallikarjun kaviya enunadi chikkabhupalan sangatya: Samagra adhyayana. (Dr S V Ayyanagoudar), Department of Kannada, Karnatak University, Dharwad.

Malayalam

1. Muraladharan, M. Literary criticism of M P Paul. (Dr N Gopinathan Nair), Department of Malayalam, University of Calicut, Calicut.

2. Thomas, Elizabeth. Analytic and comparative study of child psyche in the stories of T Padmanabhan, Madavi Kutty and M T Vasudevan Nair. (Dr S Narayanan), Department of Malayalam, University of Calicut, Calicut.

Sanskrit

1. Jagwanti. Ashtanga Yoga in Rajyoga and Hathayoga. (Dr B S Mehra), Department of Sanskrit, Maharshi Dayanand University, Rohtak.

2. Jain, Amita. Upasakadasangasutra: Ek sameekahatmaka adhyayana. Department of Sanskrit, Kurukshetra University, Kurukshetra.

3. Jain, Prabha. Vaigyanik pariprekshya mein Jain Dharam Chamanuyog ke vislesh sandarbh mein. (Dr K K Chaturvedi), Department of Sanskrit, Rani Durgavati Vishwavidyalaya, Jabalpur.

4. Khadeeja, P P. The Keralite commentaries on Dhvanyloka Locana: A study. (Dr C M Neelakandhan), Department of Sanskrit, University of Calicut, Calicut.

5. Khatr, Sunitaben Narendrakumar. Jaggudhanvi Bakul Bhushana's Jayantika: A critical study. (Dr D G Vediya), Department of Sanskrit, North Gujarat University, Patan.

6. Lakshmi, R. Sankalpa Suryodaya: A critical study. (Dr K B Archak), Department of Sanskrit, Karnatak University, Dharwad.

7. Rathva, Devsinh Bhalabhai. Nal Vilasa of Ramchandra's: A critical study. (Dr D G Vediya), Department of Sanskrit, North Gujarat University, Patan.

8. Surender Singh. Literary study of the work of Pt Hazari Lal Shastri. (Dr B S Mehra), Department of Sanskrit, Maharshi Dayanand University, Rohtak.

Telugu

1. Anjanappa, A. A comparative study of riddles in Telugu and Kannada. (Dr G S Mohan), Department of Telugu, Bangalore University, Bangalore.

2. Kanakadurga, M. Social awareness in women poetry. Department of Telugu, Potti Sreeramulu Telugu University, Hyderabad.

3. Narasimha Rao, V L. Chasre's cine lyzick: A comprehensive study. Department of Telugu, Potti Sreeramulu Telugu University, Hyderabad.

4. Narasimha Reddy, A. Songs in Telugu and Hindi on nationalist movement. Department of Telugu, Potti Sreeramulu Telugu University, Hyderabad.

5. Sanat Kumar, H P. Sri Viswanatha vari Khanda kavyalu. (Dr M Veerasha Lingam), Department of Telugu, Kakatiya University, Warangal.

6. Siva Prasad, R V. Annamayya Sankirthanallo sametaku sahitya vaichitri. Department of Telugu, Potti Sreeramulu Telugu University, Hyderabad.

7. Suryanarayana Murthy, A. Paikuriki Somanathuni rachanaku: Samajika sanskrutika parishelana. (Prof H Siva Kumar), Department of Telugu, Kakatiya University, Warangal.

8. Venkatappaiah, A. Tallapaka kavula sahithyam janajeevana chitrana. Department of Telugu, Potti Sreeramulu Telugu University, Hyderabad.

Urdu

1. Iqbal, Parveen. Bangla fiction ke Urdu tarajim. (Prof Masood Alam), Department of Urdu, Aligarh Muslim University, Aligarh.

2. Khatib, Tanveer Husamuddin. Maharashtra mein Urdu nasri adab ka irtifa asafi mutala o jayaza. (Dr M Sadullah), Department of Urdu, Nagpur University, Nagpur.

3. Sharfun Nihar Begum. Urdu mein Marathi adab ke tarajim. (Dr Khursheed Ahmad), Department of Urdu, Aligarh Muslim University, Aligarh.

Philosophy

1. Chandra Shekhar. A critical study of Bultmann's philosophical contribution to the theology of new testament. (Dr K L Sharma), Department of Philosophy, University of Rajasthan, Jaipur.

2. Meena, Autar Lal. Dharam shastra parampra evam nari adhikar: Ekalochnatmak adhyayan. (Dr Kusum Jain), Department of Philosophy, University of Rajasthan, Jaipur.

3. Sakaki, Kazuyo. Dara Shukoh's contribution to philosophy of religion with special reference to his Majma al Bahrayn. (Prof M Rafiq), Department of Philosophy, Aligarh Muslim University, Aligarh.

4. Sharma, Anjali. Teleological explanations in Biological Sciences with special reference to Darwin's theory of evolution. (Dr V S Shekhawat), Department of Philosophy, University of Rajasthan, Jaipur.

5. Suresh Babu, H R. Haridasa sahityadalli tattvajnanat: Vijayadasara yuga. (Dr Kundargi G N), Department of Philosophy, University of Mysore, Mysore.

6. Unnikrishnan, P. Materialism in contemporary Indian thought. (Dr V C Narayana Das), Department of Philosophy, University of Calicut, Calicut.

7. Zaidi, Zafrihan. Muslim vidhi ka samalochnatmak adhyayan. (Dr Sarla Kalla), Department of Philosophy, University of Rajasthan, Jaipur.



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(c) Admissions are based purely on merit, assessed at the All India Admission Test to be held on Sunday, 2nd May, 1999 at Bangalore, Chennai, Delhi, Mumbai, Kochi and Calcutta. All admissions will be completed on or before 30th June. Classes begin on 1st July, 1999.

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For Application and Bulletin, write to the Registrar with a Bank Draft for Rs. 200/- payable to the NLSIU at Bangalore. Applications will be issued from 15th January to 1st March, 1999. Last date for receipt of completed Applications is 15th March, 1999. Limited copies of the last ten years' Test papers in a volume are available on First come First serve basis. Send Bank Draft for an amount of Rs. 250/- inclusive of postage for the same. Admission to the Post Graduate and Distance Education Programmes will be advertised separately.

REGISTRAR



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- iii) Bihari Puraskar (Rs. 75,000/-) meant for an Outstanding Work in Hindi by a writer of Rajasthan only.
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- vii) K.K. Birla Foundation Awards for Sports (2 awards each carrying Rs. 75,000/-).
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- ix) K.K. Birla Foundation Fellowships in Comparative Indian Literature (Two Fellowships).
- x) K.K. Birla Foundation Fellowship in Economics.

Last Date 31 March, 1999. Full Details and Proposal/Application Forms etc. may be obtained from the Foundation's Office, Hindustan Times House, 10th Floor, 18-20 Kasturba Gandhi Marg, New Delhi-110 001 (Phone : 3317735, 3718282).

INDIA MARCHING TOWARDS NEXT MILLENNIUM



Dear Countrymen,

We took over the reins of the country nine months ago on 19th of March. At that time, we inherited instability and an economy under strain. Braving all pressures, we decided to face these difficulties and took firm steps towards socio-economic and administrative reforms. We went for the bold decision on Nuclear Test. This was not against anybody but a move to strengthen our security. It has raised the morale of the people and surged the feeling of self-pride. Every Indian has felt the glory of being an Indian.

We are proud of this significant achievement of our scientists. By adding 'Jai Vigyan' to the slogan 'Jai Jawan, Jai Kisan' we have emphasised the importance of science in the progress and development of the country. We have formulated 'Information Technology 2010' programme so that every house has access to computer. We have combined 'swadeshi' and 'liberalisation' in such a manner that even while progressing towards economic prosperity, we do not forget our age old skills, craftsmanship and traditional knowledge, rather we provide them opportunities to grow. Our objective is to provide a good life for every citizen of the country. With this aim in view, one of our very first decision was to provide more money for agriculture related programmes as India lives in its villages.

Today we are entering the last year of this century. We have to strengthen country's unity, integrity and respect for all religions. There is no place for narrow mindedness or fundamentalism here. We want a strong and glorious India to enter the 21st century where all sections live in a prosperous, peaceful and cordial atmosphere.

We look for your cooperation in this effort. We reaffirm our resolve that we would not be found wanting in discharging our responsibilities and will move forward along with all of you to make the India of our dreams a reality.

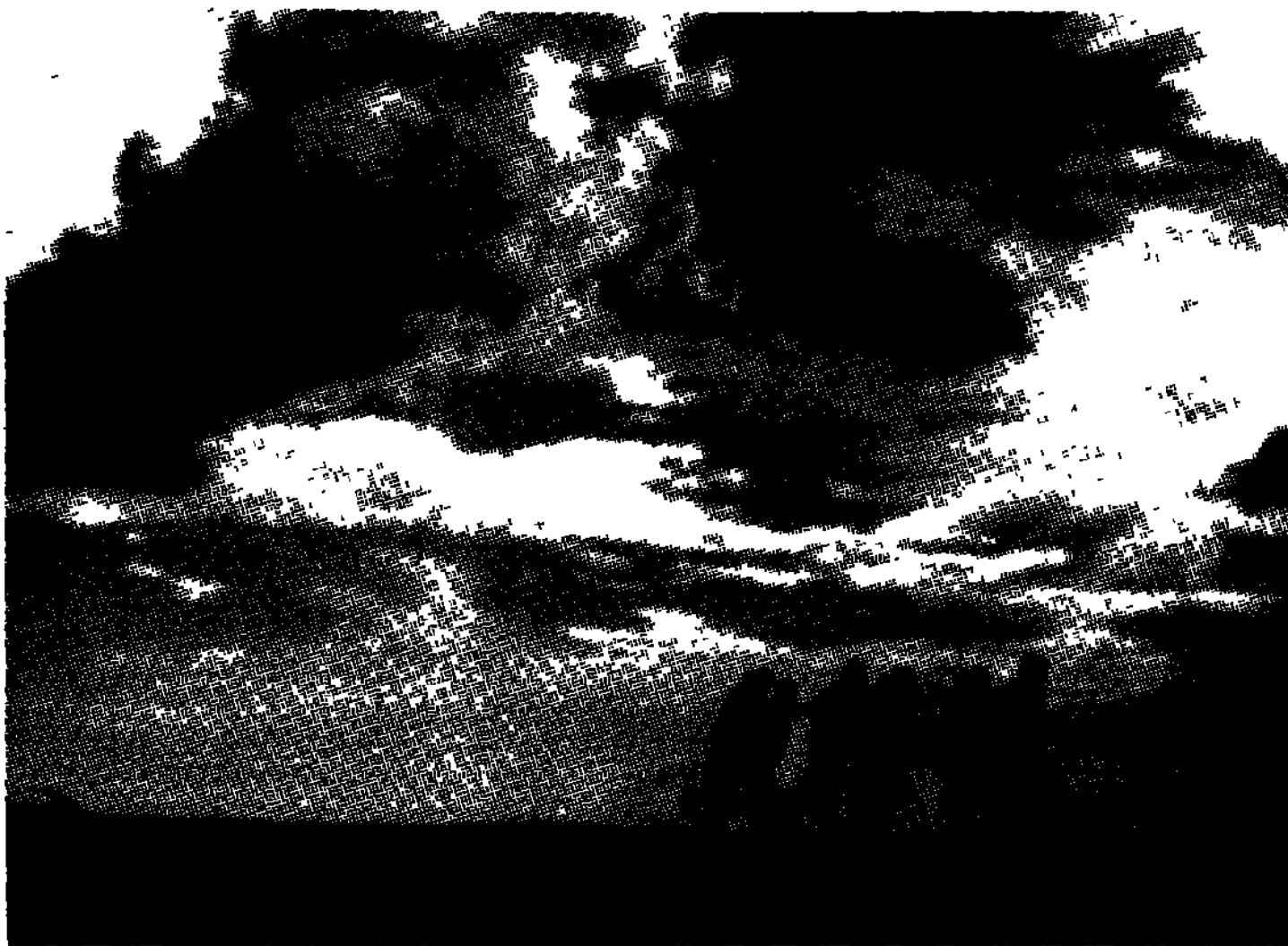
I wish all of you An Auspicious and Happy New Year.

My Best Wishes,

Atal Bihari Vajpayee
(Atal Bihari Vajpayee)

Laying foundation for better future

*A Proud
Republic of 50
Marches Towards
Next Millennium*



Republic Day
26th January, 1999

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